

REMARKS**I. Status of the Claims:**

Claims 1-15 are pending in the application.

By this Amendment, claims 1,7 and 9-12 have been amended, claims 5-6 and 8 have been canceled without prejudice or disclaimer, and new claims 16 and 17 have been added. Upon entry of this Amendment, claims 1-4, 7 and 9-17 would be pending. No new matter has been introduced by this Amendment.

II. Rejections Under 35 U.S.C. §§102 and 103:

Claims 1 and 4-15 have been rejected under 35 U.S.C. §102(b) as being anticipated by Nishio et al. (U.S. Patent No. 5,006,745). Claim 5 has been rejected under 35 U.S.C. §102(e) as being anticipated by Nakano et al. (U.S. Publication Application No. 2004/0155537 A1). Claims 2-3 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Nishio et al.

Claim 1 as amended recites, in part, that the wound assembly has a slot to pole ratio less than one to increase torque efficiency, the slot to pole ratio being selected so that a C_T value is less than 6 and a K_p value is greater than 0.9 where (1) $K_p = \sin(1 - |(\text{pitch pu} - 1)| * 90.0)$ where $\text{pitch pu} = (\text{span pitch} / \text{pole pitch})$ and (2) $C_T = p Q_s / N_c$, where p = the number of motor poles, Q_s = the number of slots, and N_c = the least common multiple between the slot number and the pole number.

Neither Nishio nor Nakano disclose or suggest the above-noted claimed feature, as amended. Accordingly, claim 1 and its dependent claims are believed to be distinguishable over the cited references.

Dependent claim 2 further recites that the motor has 36 slots and 46 poles; and dependent claim 3 further recites that the motor has 30 slots and 38 poles. Applicants respectfully submit that these claims are further distinguishable over the cited references.

Specifically, in the Office Action, the Examiner asserts that “it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the number of slots and poles accordingly . . . in order to operate with less noise, since it has been held that discovering an optimum value of a result effective variable involves only a routine skill in the art.” However, as noted in MPEP §2144.05, a particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before any determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. The Nishio reference is silent as to the claimed slot and pole arrangement in both claims 2 and 3, and the various preferred slot/pole formulas in Nishio do not appear to cover these claimed arrangement. Accordingly, it is respectfully submitted that the claimed slot and pole arrangement of dependent claims 2 and 3 would not involve only a routine skill in the art in view of the Nishio teachings.

New claim 17 is directed to an arrangement in which the wound assembly has a slot to pole ratio less than one to increase torque efficiency, the slot to pole ratio being chosen to have a low total harmonic distortion.

The cited references do not appear to disclose or suggest that the slot to pole ratio (which is less than one) is chosen to have a low total harmonic distortion. As noted on page 4 of the Office Action, the Examiner appears to rely on Nishio as teaching this feature. The Office Action however does not address with any particularity how or where Nishio discloses or

suggest “low total harmonic distortion”. Accordingly, claim 17 is believed to be distinguishable over the cited references.

CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. 13-4500, Order No. 0403-4104.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 13-4500, Order No. 0403-4104.

Respectfully submitted,
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